

09/988,322  
356202/00

**IN THE CLAIMS:**

**Please amend the claims, as follows:**

1. (Previously presented) A power control circuit for a laser diode, comprising:
  - an amplifier circuit producing at an output terminal thereof an output voltage responsive to a voltage difference between a reference voltage and a feedback voltage that is indicative of an optical power generated by said laser diode in response to a driving current flowing therethrough; and
  - a driving circuit responding to said output voltage to control said driving current so as to make said voltage difference small,
  - said amplifier circuit driving said output terminal with a first time constant during a steady operation and with a second time constant that is smaller than said first time constant upon initiation and before said steady operation.
2. (Original claim) The circuit according to claim 1, wherein said second time constant is derived by increasing a driving ability of said amplifier circuit upon said initiation larger than that during said steady operation.
3. (Original claim) The circuit according to claim 1, wherein said amplifier circuit includes an operational amplifier, a capacitor coupled between output and input ends of said operational amplifier, and a first switch coupled in parallel to said capacitor, said first switch being turned OFF during said steady operation and ON upon said initiation.
4. (Original claim) The circuit according to claim 3, wherein said amplifier circuit further includes a first resistor, a second resistor coupled in parallel to said capacitor, and a second switch coupled to said input end of said operational amplifier through said first resistor, said second switch being turned ON during said steady operation and OFF upon said initiation.
5. (Original claim) The circuit according to claim 3, wherein said amplifier circuit further includes a reference voltage generation circuit coupled to said amplifier circuit, generating first and second reference voltages and providing said amplifier circuit with said first reference voltage as said reference voltage during said steady operation and with said second reference

09/988,322  
356202/00

voltage that is higher than said first reference voltage as said reference voltage upon said initiation.

6. (Previously presented) The circuit according to claim 5, wherein said amplifier circuit further includes a third switch coupled to said capacitor, forming an electrical path between said input end of said operational amplifier and said capacitor during said steady operation and providing said capacitor with said first reference voltage upon said initiation.

7. (Original claim) The circuit according to claim 4, wherein said amplifier circuit further includes a fourth switch coupled between said input end of said operational amplifier and said capacitor, forming an electrical path between said input end of said operational amplifier and said capacitor during said steady operation and providing said capacitor with said feedback voltage without said electrical path upon said initiation.

8. (Previously presented) A power control circuit for a laser diode, comprising:

a first amplifier circuit producing, when activated, at a first output terminal thereof a first output voltage responsive to a first voltage difference between a first reference voltage and a feedback voltage that is indicative of an optical power generated by said laser diode in response to a driving current flowing there through;

a second amplifier circuit producing, when activated, at a second output terminal thereof a second output voltage responsive to a second voltage difference between a second reference voltage and said feedback voltage; and

a driving circuit responding to an activated one of said first and second output voltage to control said driving current so as to make a corresponding one of said first and second voltage difference small, respectively,

at least one of said first and second amplifier circuits driving one of said first and second output terminals with a first time constant during a steady operation and with a second time constant that is smaller than said first time constant upon initiation and before said steady operation.

9. (Original claim) The circuit according claim 8, wherein said second time constant is derived by increasing a driving ability of said amplifier upon said initiation larger than that

09/988,322  
356202/00

during said steady operation.

10. (Original claim) The circuit according claim 8, wherein at least one of said first and second amplifier circuits includes an operational amplifier, a capacitor coupled between output and input ends of said operational amplifier, and a first switch coupled in parallel to said capacitor, said first switch being turned OFF during said steady operation and ON upon said initiation.

11. (Previously presented) The circuit according claim 10, wherein at least one of said first and second amplifier circuits further includes a first resistor, a second resistor coupled in parallel to said capacitor, and a second switch coupled to said input end of said operational amplifier through said first resistor, said second switch being turned ON during said steady operation and OFF upon said initiation.

12. (Original claim) The circuit according claim 11, wherein at least one of said first and second amplifier circuits further includes a reference voltage generation circuit generating first and second reference voltages and providing said operational amplifier with said first reference voltage during said steady operation and with said second reference voltage that is higher than said first reference voltage as said reference voltage upon initiation.

13. (Previously presented) The circuit according claim 11, wherein at least one of said first and second amplifier circuits further includes a third switch coupled to said capacitor, forming an electrical path between said input end of said operational amplifier and said capacitor during said steady operation and providing said capacitor with said first reference voltage upon said initiation.

14. (Original claim) The circuit according claim 12, wherein at least one of said first and second amplifier circuits further includes a fourth switch coupled between said input end of said operational amplifier and said capacitor, forming an electrical path between said input end of said operational amplifier and said capacitor during said steady operation and providing said capacitor with said feedback voltage without said electrical path upon said initiation.

09/988,322  
356202/00

15. (Previously presented) A power control circuit for a laser diode, comprising:  
an amplifier circuit producing at an output terminal thereof an output voltage responsive to a voltage difference between a reference voltage and a feedback voltage that is indicative of an optical power generated by said laser diode in response to a driving current flowing therethrough; and  
a driving circuit responding to said output voltage to control said driving current so as to make said voltage difference small,  
wherein said output voltage comprises a steady operation period of time and an initiation period of time prior to said steady operation period of time,  
wherein said driving current flows through said laser diode during both said steady operation period of time and said initiation period of time, and  
wherein said amplifier circuit drives said output terminal with a first time constant during said steady operation period of time and with a second time constant, which is smaller than said first time constant, during said initiation period of time.
16. (Previously presented) The circuit according to claim 8, wherein each of said first and second output voltages comprises a steady operation period of time and an initiation period of time prior to said steady operation period of time.
17. (Previously presented) The circuit according to claim 16, wherein said driving current flows through said laser diode during both said steady operation period of time and said initiation period of time.
18. (Previously presented) The circuit according to claim 16, wherein at least one of said first and second amplifier circuits drives an associated one of said first and second output terminals with a first time constant during said steady operation period of time and with a second time constant, which is smaller than said first time constant, during said initiation period of time.
19. (Previously presented) The circuit according to claim 1, wherein said output voltage comprises a steady operation period of time and an initiation period of time prior to said steady operation period of time.

09/988,322

356202/00

20. (Previously presented) The circuit according to claim 1, wherein said driving current flows through said laser diode during both said steady operation period of time and said initiation period of time.

21. (Currently amended) A power control circuit for a laser diode, comprising:

an amplifier circuit producing at an output terminal thereof an output voltage responsive to a voltage difference between a reference voltage and a feedback voltage that is indicative of an optical power generated by said laser diode in response to a driving current flowing therethrough, said amplifier circuit including an operational amplifier;

a driving circuit responding to said output voltage to control said driving current so as to make said voltage difference small;

a capacitor coupled between input and output ends of said operational amplifier ~~and~~;

a first switch coupled in parallel to said capacitor;

a first resistor coupled to an input end of said operational ~~amplifier~~ amplifier; and

a second switch coupled to said input end of said operational amplifier through said first resistor.

22. (Canceled)